



## Department of Community Development

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To: Planning Commission

June 28, 2012

From: Evan Maxim, Senior Planner

RE: Staff Recommendation Memo #4 (**Revised July 12, 2012**):

Erosion Hazard areas, Landslide Hazard areas, and the Erosion Hazard near Sensitive Water Body overlay

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The following memorandum was presented to the planning commission on June 28, 2012 as part of their deliberation. Following review, the planning commission provided direction related to each potential code revision. In this revision, the planning commission direction is listed at the end of each item in *italicized text*.

### Background:

This memorandum is intended to provide the Planning Commission with a staff summary of policy choices for amendments to the existing Environmentally Critical Areas regulations based upon the Best Available Science by A) clearly identifying recommended changes to the city code for Erosion Hazard areas, Landslide Hazard areas, and the Erosion Hazard near Sensitive Water Body overlay, and B) providing the basis for the recommendation.

Other amendments have also been identified in this memorandum for the Planning Commission's consideration, in particular the specific recommendations for amendments by the public. These amendments are identified separately for the Planning Commission's consideration.

Please recall that the Planning Commission will consider whether to advance the identified amendments to the next Planning Commission review and provide further direction to staff as necessary. Staff will incorporate the further direction into the proposed code amendments for public review and Planning Commission action later in the schedule.

**Summary:** Please note that the numbering within this document will correspond to the numbering assigned to the proposed amendments contained in the forthcoming and attached draft code amendments. Draft code language has not yet been prepared for the proposed amendments below, but will be prepared based on direction provided on June 28<sup>th</sup>.

Consultant Report Erosion Hazard area recommendations. The staff has identified the following amendments to the Environmentally Critical Areas Regulations based upon the Best Available Science Report provided by the city's consultant:

- 4-1. Define the "fully mitigated" conditions when construction is excepted from the seasonal clearing restrictions and allowed during the wet season [SMC 21A.50.220(1)(a)]. The director currently has authority to allow for construction during the wet season based upon mitigation of the site, typically as documented in a geotechnical report (i.e. a critical areas study). The proposed amendment would clarify what criteria / conditions of approval are necessary in authorizing wet season construction.

**Staff Comment:** Staff recommends *advancing* this recommendation to July. Currently the city bases conditions on the recommendations provided by the geotechnical report, which has led to some inconsistency from project to project in mitigation.

**PC Direction:** *Advance this proposed amendment.*

- 4-2. Specify actions required when measured site discharges exceed state water quality criteria [SMC 21A.50.220(4)]. The regulations currently provide authorization for the city to address water quality issues, but do not specify remedies. The proposed amendment would reference the applicable provisions of the adopted Surface Water Design Manual.

**Staff comment:** Staff recommends *advancing* this recommendation to July. The proposed amendments would clarify existing practices by the city staff.

**PC Direction:** *Advance this proposed amendment. Provide a summary of other code compliance tools.*

Consultant Report Erosion Hazard near Sensitive Water Body overlay recommendations. The staff has identified the following amendments to the Environmentally Critical Areas Regulations based upon the Best Available Science Report provided by the city's consultant:

- 4-3. Amend the description of the top of the no-disturbance area for clarity and require that delineation of the no-disturbance area by qualified consultant [SMC 21A.50.225(3)(a)] The current regulations note that the upslope boundary of the no-disturbance area shall be field verified / located. The proposed amendments would specify the type of qualified professional needed to field locate the no-disturbance area, clarify the location of the no-disturbance area, and clarify the city's review and approval role.

**Staff comment:** Staff recommends *advancing* this recommendation to July. The proposed amendment would further clarify the current definition of the no-disturbance area, and would avoid using confusing terminology.

**PC Direction:** *Advance this proposed amendment. Include a reference to LIDAR*

- 4-4. Update maps to correctly label "Erosion Hazard Areas" (Figure 1 of the BAS report) and "Erosion Hazard Near Sensitive Water Body Overlay". The current maps on the city website should be revised for consistency and clarification.

**Staff comment:** The proposal would not result in immediate amendments to the ECA regulations. Staff recommends that the Planning Commission include this in their list of recommendations to the City Council as a separate "follow up" item.

**PC Direction:** *Advance this proposed amendment.*

- 4-5. Amend language specifying which developments must evaluate infiltration from those properties that historically "drained to" the no-disturbance zone to those properties that currently "drain to" the no-disturbance zone. [SMC 21A.50.225(3)(b)]. The proposed amendment would revise the standard to apply to those properties that drain to the no-disturbance area, without requiring reliance on historical drainage patterns.

**Staff comment:** Staff recommends *advancing* this recommendation to July.

**PC Direction:** *Advance this proposed amendment. Provide additional information evaluating infiltration.*

- 4-6. Revise the regulations to clarify that conveying water via a continuous storm pipe downslope to a point where there is no erosion hazard area downstream from the discharge, and discharging at flow durations consistent with King County Level 2 flow control, constitutes an outlet designed using the best available science. [21A.50.225(3)(c)(iii), 21A.50.225(3)(d)(iii)]. The existing regulations focus on infiltration as a first priority, then allow for a drainage outlet designed using Best Available Science. The proposed amendment would limit drainage outlet design to those specified above.

**Staff comment:** Staff recommends *not advancing* this recommendation to July. The city recently modified these provisions as part of the "code block" amendments, in particular to allow for alternative design approaches for drainage outlets, provided the alternative was supported by Best Available Science. The proposed amendment would restrict flexibility for drainage outlet design.

**PC Direction:** *Advance this proposed amendment. Provide information regarding other types of BAS existing for other drainage design alternatives.*

Consultant Report Landslide Hazard Area recommendations. The staff has identified the following amendments to the Environmentally Critical Areas Regulations based upon the Best Available Science Report provided by the city's consultant:

- 4-7. Revise the standard within SMC 21A.50.260(1) such that landslide hazard area buffers extend from top and toe of slope (instead of from edge). The current regulations require buffers from the "side" landslide hazard areas (i.e. buffers extending laterally across the slope). There is no Best Available Science supporting buffers extending from the side of landslide hazard areas.

**Staff comment:** Staff recommends *advancing* this recommendation to July.

**PC Direction:** *Advance this proposed amendment.*

- 4-8. Consider whether to allow slopes up to 20 feet high to be exempt per SMC 21A.50.260(7). The current regulations allow the city to waive landslide hazard area buffers / protections, for slopes greater than 10 feet tall but less than 20 feet tall. The proposed amendment would eliminate exemptions for slopes greater than 10 feet in height but less than 20 feet. BAS indicates that there is some risk in allowing this exemption; however it is a policy decision as to how much risk is acceptable.

**Staff comment:** Staff recommends *not advancing* this recommendation to July. Waivers are based upon a site specific evaluation of the landslide hazard area qualifying for the exemption. This provision provides for flexibility on the part of the city in applying regulations.

**PC Direction:** *Advance this proposed amendment. Provide additional information regarding peer jurisdictions.*

- 4-9. Delete SMC 21A.50.260 (6) regarding drainage design in landslide hazard areas. BAS does not support requiring specific drainage improvements, such as on-site infiltration, within landslide hazard area buffers. The BAS available generally supports the recommendations contained within the adopted Surface Water Design manual, especially as related to drainage control in landslide hazard areas. Further, the BAS report indicates that engineering geology concepts are generally opposed to introducing a water source that could destabilize slopes. The proposed amendments would eliminate the drainage requirements contained in SMC 21A.50.260 and instead reference the adopted Surface Water Design Manual.

**Staff comment:** Staff recommends *advancing* this recommendation to July. The city's experience is that many properties in landslide hazard areas do not have soils suitable for infiltration generally, which has led to design challenges for property owners. The proposed regulations will focus on more appropriate methods of drainage design, such as requiring tightlines past the landslide hazard area or minimizing impervious surfaces.

**PC Direction:** *Advance this proposed amendment.*

- 4-10. Add an option for the City to have a third party review of geotechnical reports in landslide hazard areas. Many jurisdictions require independent third party review of geotechnical reports; Sammamish currently requires third part review on a case-by-case basis. The proposed amendments would clarify that the city may require third party review of geotechnical reports.

**Staff comment:** Staff recommends *advancing* this recommendation to July. The city does currently use a third party to review geotechnical reports; the clarification of this approach is appropriate.

**PC Direction:** *Advance this proposed amendment.*

- 4-11. Revise SMC 21A.50.260 (2)(b) to include specified minimum static and seismic factors of safety for slope stability. The existing code requires that an estimate of slope stability needs to be completed as part of a critical areas study; however a specific factor of safety is not established. The BAS report recommends that buffers be established so that any development near the slope has a minimum factor of safety for slope stability of 1.5 for static conditions and 1.1 for seismic conditions, based on current building code seismic design conditions

**Staff comment:** Staff recommends *advancing* this recommendation to July. A city standard related to acceptable slope stability would assist the staff in evaluating proposed development.

**PC Direction:** *Advance this proposed amendment.*

- 4-12. Revise SMC 21A.15.680 to include a definition of distinct break within a slope. The existing code does not provide for a clear definition of the top and toe of landslide hazard areas related to steep topography (e.g. steep slopes). The proposed amendment would clarify how the location of the top and toe of landslide hazard areas should be established.

**Staff comment:** Staff recommends *advancing* this recommendation to July. This particular definition will clarify an ongoing discussion point between the city and property owners, allowing for better customer service.

**PC Direction:** *Advance this proposed amendment. Please provide examples.*

- 4-13. Revise definition of geologist in SMC 21A.15.545 to licensed geologist. The current regulations do not require that a geologist be licensed by the State of Washington. The proposed amendment would update the definition to, "A professional geologist licensed in the State of Washington." The licensing of geologists became a requirement in the State of Washington in 2000 (WAC 308-15).

**Staff comment:** Staff recommends *advancing* this recommendation to July.

**PC Direction:** *Advance this proposed amendment.*

- 4-14. Revise definition of geologist and qualified professional in SMC 21A.15.545 and SMC 21A.15.942 respectively. The current regulations do not require that a geologist be licensed by the State of Washington. The proposed amendment would update the definition to, "A professional geologist licensed in the State of Washington." The licensing of geologists became a requirement in the State of Washington in 2000 (WAC 308-15).

**Staff comment:** Staff recommends *advancing* this recommendation to July.

**PC Direction:** *Advance this proposed amendment.*

Public Comment recommendations. The staff has identified the following amendments to the Environmentally Critical Areas Regulations based upon public comment for the Planning Commission to consider advancing to July:

- 4-15. Allow development, and specifically subdivision of property in the no-disturbance area, contained within the Erosion Hazard near Sensitive Water Body overlay (ref. public comments #37, 38, 62, 119, 123 & 131). The

regulations currently prohibit subdivision within the no-disturbance area of the EHNSWB overlay. Several public comments have requested that the regulations be amended to allow subdivision. The BAS report prepared by the city's consultant notes that allowing development within the no-disturbance area is not consistent with BAS.

**Staff comment:** Staff recommends *advancing* this amendment for additional consideration in July.

Additional staff analysis and research will be conducted on the following:

- a. Identifying the policy basis for the amendment.
- b. Providing appropriate mechanisms to address the risk during development and post-development to the features that the EHSNWB overlay is intended to protect.

**PC Direction:** *Advance this proposed amendment. Summarize the risk management mechanisms available. Evaluate the use of TDR's as a possible alternative. Provide specific alternatives for review.*